Project Consistency with an Adopted IRWM Plan

The proposed projects contained in this 2014 IRWM Drought Solicitation Program application are consistent with the Poso Creek IRWM Plan Update in that they conform to the following:

1) Projects have been developed in a collaborative process that includes the RWMG, Stakeholders, and Interested Parties (all IRWM Group participants and public interests),
2) Projects are included in the Poso Creek IRWM Plan "Plan Project and Program List", contained in Appendix A2 of the Plan Update, and
3) Projects have been submitted to and reviewed by the Poso Creek RWMG using the Project Definition and Characterization Form (PDCF), a formal project and program submission form contained in Appendix G Plan Update.

Any projects and programs submitted to the RWMG using the PDCF which have been reviewed and deemed applicable to the region, following the IRWM Group's Regional Goals and Measurable Objectives (Section 4 of Plan Update), are to be included in an Annual Report made available to the RWMG, Stakeholders, and Interested Parties (general public). The Annual Report will track additions to the Plan Project and Program List that occur during each calendar year as part of a "Report Card" describing the implementation activity both quantitatively and qualitatively.

The proposed three projects for the Poso Creek IRWM Drought Grant Proposal include:

1. **NKWSD Calloway Canal Improvements** – Identified on page 1 of 5 of the Poso Creek IRWM Project and Program Report List, Active Projects and Programs, Map No. 7A as shown on Figure 5.1, page 5-3 of the Plan Update.
2. **Lost Hills Utility District New Well and Water Storage Tank** - Identified in Appendix A2 of the Plan Update, on page 3 of 5 of the Poso Creek IRWM Project and Program Report List, Active Projects and Programs, as Map No. 19A. This project is also shown on Figure 5.1, page 5-3 of the Plan Update.

   The LHUD project was previously submitted by the Poso Creek RWMG in the Proposition 84 'Round 2' Implementation funding proposal (Round 2). Since the Round 2 proposal did not receiving funding, the Poso Creek RWMG and *economically-disadvantaged community* (DAC) Work Group (section 2.3 of Plan Update) recommended this project to the DWR for technical assistance LHUD received some funding for feasibility level studies of the water distribution system in the Lost Hills, CA area as part of the Poso Creek IRWM Round 1Proposal (Project 5B), under the direction of Self-Help Enterprises (SHE). The LHUD feasibility study has since been completed and the resulting report information is being utilized for this application. An updated PDCF for this project was submitted to and reviewed by the Poso Creek RWMG at the June, 2014 Poso Creek Implementation meeting.
3. **City of McFarland Reservoir, Booster Pump Station, and System Intertie** – This project was developed through meetings of the DAC Work Group as a component of their ongoing efforts to support and develop DAC community projects and programs in

and around the Poso Creek region. These efforts include enhancing DAC water supply, addressing drinking water treatment needs, and upgrading waste water treatment facilities. The project is a specific component of DAC project development, as identified on page 3 of 5 of the Poso Creek IRWM Project and Program Report List, Active Projects and Programs, and also identified as Map No. 19 as shown on Figure 5.1, page 5-3 of the Plan Update (will be identified as Map No. 19L in future versions of the map). A PDCF for this McFarland project was submitted to and reviewed by the RWMG at the June, 2014 Implementation meeting, since the project is now further developed, refined, and considered "ready for implementation". A copy of the PDCF for this project is contained at the end of Attachment 1.

Following recommendations by the DAC Work Group, McFarland grants coordinator, and discussions with the RWMG, the Poso Creek IRWM Group decided to submit the LHUD and the McFarland DAC projects (projects 2 and 3 listed above) as part of the Poso Creek Drought application. As mentioned above, the Poso Creek IRWM Plan 2014 Update identified annual reporting as the procedure to capture additional project and program submissions, such as these DAC projects, that will occur during implementation activity throughout each calendar year. The Poso Creek IRWM Group also maintains an updated list of projects and programs on their website <semitropic.com/PosoCreekIRWM.html>.

In the original 2007 IRWM Plan, submitted projects and programs were ranked in tiers; "Tier 1" projects and programs supported the highest priority strategies of the IRWM Plan, principally water supply reliability. "Tier 2" projects and programs, while still considered important towards accomplishing the goals of the IRWM Group, were largely considered secondary when assessing the potential implementation and development of specific projects and programs. The IRWM Plan identified these projects and programs as having secondary benefits, once implemented, or may have benefits other than water supply reliability, and provided and recognized the need and importance of integrating other strategies into implementation for a *regional* approach. It is worth noting that this approach facilitated the planning and implementation of over $82M in projects and programs which have been funded either by state, federal, or local sources (e.g., district funded) since 2007. As part of the Plan Update, a "Report Card" was developed to track and record the continuous efforts that Stakeholders and other Interested Parties, particularly representatives' from DACs. As mentioned above, this Report Card identifies evaluated projects and programs that accomplish the Regional Goals and Measurable Objectives of the Poso Creek IRWM Plan Update, and can thus be integrated into multi-benefit grant proposals. The Plan Update also includes the use of the PDCF for project and program submission to the Poso Creek RWMG for review and subsequent inclusion in the Plan Project and Program List (i.e., inclusion in the IRWM Group's planning and implementation efforts).

Use of this procedure for defining, submitting, and reviewing projects and programs is covered in Section 5 of the Plan Update. In short, the procedure allows the Poso Creek RWMG to implement projects and programs using an interactive approach to review and select qualified submissions (i.e., submissions which adhere to the IRWM Group's Regional Goals and

Measurable Objectives) conducted through regular meetings. The Poso Creek RWMG is of a manageable, functioning size where decision can be made quickly under this format. The LHUD and the City of McFarland projects are both examples of projects that were developed through the DAC Work Group, vetted to the RWMG through the IRWM Group meeting, and advanced into a specific, focused, funding application.

POSO CREEK IRWMP
Management Group

1101 Central Avenue, Wasco, CA 93280
661-758-5113

Project Definition and Characterization Form (PDCF)

Project and Program Submission Form for the Poso Creek Integrated Regional Water Management Plan (IRWMP) 2014 Update

Please mail completed form to the following address, or bring complete form to one of the regular IRWM meetings (as scheduled);

Poso Creek RWMG
c/o Semitropic WSD
1101 Central Avenue
Wasco, CA 93280

For questions or concerns regarding the form, please contact:

Paul Oshel, Poso Creek IRWM Representative
(661-758-5113)

1.0 Background Information

Please provide the following information regarding the project/program sponsor.

Implementing Agency/ Organization / Individual:
City of McFarland

Agency / Organization / Individual Address:
401 W. Kern Avenue
McFarland, CA 93250

Possible Partnering Agencies:

Contact Person Name:
Curtis Skaggs

Title:
City Water Engineer

Telephone:
661-393-4796

Fax:
661-393-4799

Email:
<cskaggs@djacivil.com>

Please provide the following information regarding the proposed project or program. Check the box that applies:

[X] Project (e.g. structural enhancements, infrastructure upgrades, etc.)

[ ] Program (e.g. policy updates, management suggestions, etc.)

Project or Program Name:
Browning Road Reservoir – 1.0 Million Gallon Welded Steel Reservoir, Booster Pump Station, and system intertie.

Project or Program Cooperating Agency/Organization(s), including potential funding sources (e.g., Kern County Water Agency, DWR/USBR Funding, environmental or agricultural groups):
DWR/USBR

Project Status (e.g., new, ongoing, expansion, new phase with brief description):
New

Please provide the following information regarding the location of the project, including the name of the District(s) or Agency which has jurisdiction over the project area. If the proposal is for a non-structural program, please state the District(s) or Agency where the program will be implemented.

Districts or Agencies (i.e., location corresponding to District or Agency service areas):
City of McFarland

Description of Proposed Location:
Project location is in McFarland, CA 93250, east of Browning Road between Perkins Avenue and Elmo Highway.

Latitude (if available):
35°41'43" N

Longitude (if available):
119°13'15" W

2.0 Project/Program Description

Please provide a general description of the proposed project or program, including an assessment of the potential impacts and benefits of implementing the project or program. This section should provide information regarding the project concept, general project information, and readiness to proceed.

The proposed project includes the construction of a new 1.0 million gallon welded steel reservoir, a booster pump station, and system improvements to improve the conveyance capacity of the water system between the east and west side of Highway 99.

Construction of a new water storage reservoir and booster pump station at the existing Browning Road Well facility will improve the system's reliability. The system currently has only one storage tank which is located west of Highway 99. PG&E provides electricity west of Highway 99 and SCE provides electricity east of Highway 99. By constructing a new storage reservoir and pump station on the east side of Highway 99, in the event of a power loss by either electric utility provider the new storage tank and booster pump station would remain operational until power is restored as the Browning Road Well Facility is equipped with a diesel generator which was adequately sized to power the proposed booster pumps and the Browning Road Well pump simultaneously.

The City relies exclusively on groundwater as its water supply source, with three active supply wells including the Browning Road Well. The City is immediately surrounded by agriculture including a mix of vineyards and orchards, and due to ongoing drought conditions groundwater pumping for the irrigation of all agriculture crops has increased. In the event that groundwater levels in and around the City drop below the pump setting depth of any of the City's supply wells, having additional storage capacity would aid in allowing the City to continue water service to the City's residents for several days until provisions could be made to lower the affected well(s) pump setting depth.

The City currently uses a storage reservoir and booster pump station on the west side of Highway 99 to provide water to its customers during peak and off-peak hours to reduce the usage of the supply wells during this time period. This is done both in an effort to reduce the electricity cost and also reduce the electricity demand during the peak hours of the day. Installing the proposed 1.0 million gallon reservoir would allow the City to further reduce electrical demand during peak hours and take advantage of time-of-use pumping. The project is not locally cost effective; however, over the long term operation of the reservoir and booster pump station the project would reduce energy usage during peak hours significantly and allow the City to maintain reasonable water rates in the disadvantaged community.

Two of the City's existing water supply wells, Taylor Well and Well No. 6, have Arsenic concentration levels that are historically borderline ranging generally between 8-9 ppb during routine well sampling. Worsening drought conditions could negatively affect the water quality. This would occur by lowering the groundwater level such that the well(s) draw from a lower portion of the aquifer thereby potentially reducing or eliminating the water production from upper zones of the aquifer that normally yield lower arsenic concentrations. This could potentially lead to an increase in the Arsenic concentration of the groundwater above the established maximum contaminant limit (MCL) of 10 ppb.

The Project would provide an overall increase in the production capacity of the Browning Road Well Facility which has historically lower arsenic concentrations compared to Taylor Well and Well No. 6. Therefore the City could better absorb the loss of one of these wells in the event that lowering

groundwater levels affect the groundwater quality. The proposed Project would also provide an additional pipeline intertie between the distribution system piping west of Highway 99 and east of Highway 99 to increase the conveyance capacity of the Browning Road Well Facility booster pump station to supply the west side of the City.

If applicable, please list the existing water conveyance infrastructure associated with the proposed project or program:

The proposed project involves construction of system improvements to improve the system's conveyance capacity between the east and west side of Highway 99. In addition, the project includes the construction of a new welded steel water storage reservoir and booster pump station at the existing Browning Road Well facility, which was designed to accommodate installation of a storage tank and booster pump station.

Source of assumed increased supply or demand reduction (check all that apply):

☐ Surface Water (Supply Management)	☐ Groundwater Recharge (Storage/Banking)	☒ Conveyance/Delivery Efficiency
☒ Groundwater (Treatment)	☐ Conservation/Water Use Efficiency	☐ Conjunctive-Use Management
☐ Transfer/Exchange	☐ Other (describe): _____	

If applicable, please list any available documents which contain information specific to the proposed project or program (include conceptual plans, permits, drawings, and any technical documents):

Draft Plans – Browning Road Facility 1.0 Million Gallon Welded Steel Reservoir and Booster Pump Station
Draft Contract Documents and Technical Specifications

For projects or programs ready for construction or implementation, briefly describe the readiness-to proceed:

Preliminary Construction Plans and Specifications have been prepared for the project. In addition, the CEQA Negative Declaration documents have been prepared and circulated for review and have only to be adopted by the City. This project is near shovel-ready, as much of the engineering work and project planning have already been completed.

Does the project have the potential to reduce dependence on water originating from the Sacramento-San Joaquin River Delta?

☐ Yes ☒ No ☐ Not Sure

Does the project address any known environmental justice issues?

☐ Yes ☒ No ☐ Not Sure

Is the project located within or adjacent to an *economically-disadvantaged community* (DAC)?

☒ Yes ☐ No ☐ Not Sure

Does the project include DAC participation, or involvement from the DAC Representative or Work Group?

☒ Yes ☐ No ☐ Not Sure

If yes, please identify the group, organization, or requested services of the DAC Representative or Work Group:

The project is for the City of McFarland and the City Council will be directly involved in the approval of the proposed design for the construction of the Browning Road Reservoir, Booster Pump Station, and System Intertie.

Please describe any benefits that the proposed project or program may have towards preparing the region for the presumed effects of climate change, see Section 13.0 of the 2014 IRWM Plan:

The most prominent effect of climate change affecting the region is related to the recent reduction in annual precipitation which causes farmers in the region to increase groundwater pumping for irrigation of crops. Should climate change effects continue to reduce annual precipitation in the region and statewide, the increased groundwater pumping for agricultural operations will eventually lead to a reduction in the groundwater table. This project will help prepare the region for these presumed effects by providing the City with additional storage which would allow the City to continue providing water to customers for the lowering of groundwater pumps in any of the City's water supply wells should Groundwater levels continue to decrease. Furthermore, increased storage capacity will be provided that will allow the City to turn off wells for longer periods of time during the day. This will reduce wear and tear on the pumps and motors and provide more flexibility for when wells are temporarily taken out of service.

3.0 Proposal Impacts and Benefits to Region

Please provide an estimate (quantitative and/or qualitative) of specific impacts or benefits realized by implementation of the proposed project or program. There does not necessarily have to be a model or study verifying these estimates, however, the applicant should be prepared to justify any of the identified impacts or benefits to the IRWM Group.

Total Project Area (acres)	**±1**
Annual Yield (AF)	**±750 Acre-Feet**
Annual Demand Reduction (AF)	**N/A**
Rehabilitated Land (acres)	**N/A**

Primary benefits/impacts anticipated during specific water-year types (check all that apply):

☒ Median/Average Year ☒ Dry Year (Drought) ☒ Wet Year

Primary benefits/impacts anticipated during specific season (check all that apply):

☒ Summer (Jun – Aug) ☐ Fall (Sept – Nov)

☐ Winter (Dec – Feb) ☐ Spring (Mar – May)

APPROX. TOTAL COST	**$2,037,500.00**
Annual O&M or Mgmt. Costs	**±$3,900.00**
Life of Project/Program (years)	**50 years**

Please provide a preliminary description of a schedule for project/program implementation:
TBD

PROPOSED START DATE	**TBD**

4.0 IRWM Plan Measurable Objectives

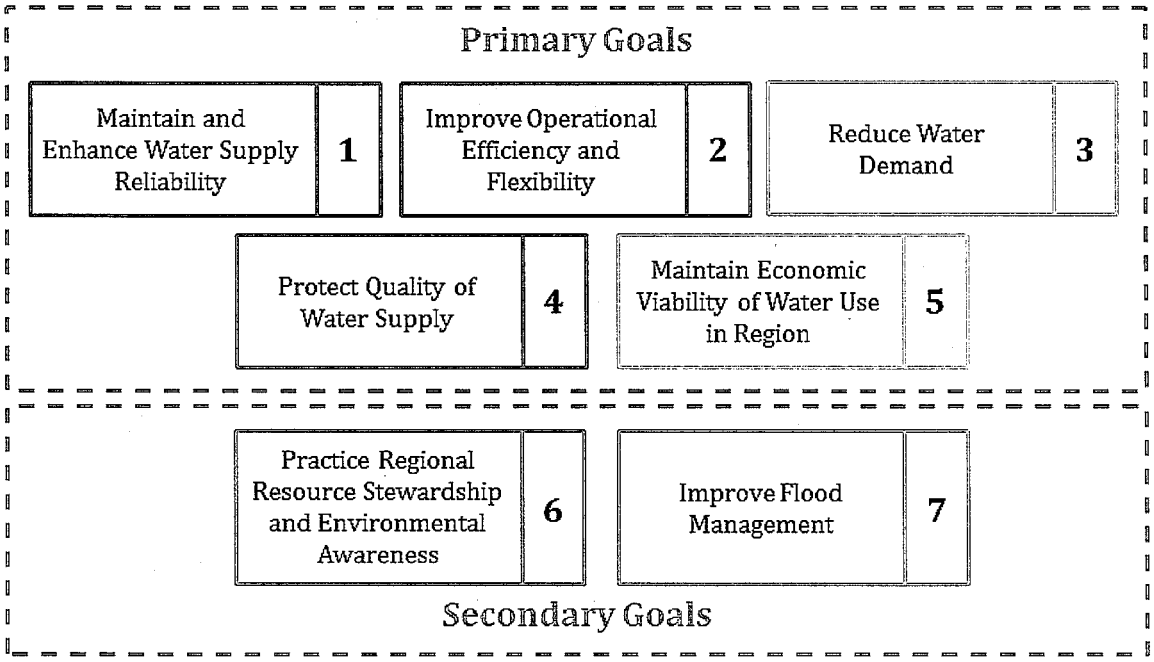
Please indicate below whether the proposed project or program meets any of the Poso Creek IRWM Plan 'Measurable Objectives', as stated in Section 4.0 of the Plan. Where necessary/appropriate, please provide a brief explanation of how the proposal meets the objective(s).

		Met (check)	Comments/Description
A	Increase reliability of surface water supplies delivered to region.		
B	Identify water conveyance improvements, direct recharge, and in-lieu service area expansion.	X	**Project improves system hydraulics by establishing an additional system intertie between the east and west side of Highway 99.**
C	Increase absorptive capacity within the region.		
D	Promote regional conjunctive water-use.		
E	Support groundwater monitoring activities.		
F	Maintain and improve quality of water supply.	X	**Water system reliability will be improved as a result of the project through construction of a new storage reservoir and booster pump station.**
G	Enhance region-wide flood control measures.		
H	Promote environmental conservation and support wildlife habitat enhancement.		
I	Promote environmental conservation and support wildlife habitat enhancement.		
J	Implement region-wide water management actions.		

Measurable Objectives (continued):

		Met (check)	Comments/Description
K	Maintain compliance with State and Federal planning requirements.	X	**Project would be completed in compliance with State and Federal planning requirements, including conducting the required CEQA environmental impact review process.**
L	Maintain coordination between Poso Creek RWMG, stakeholders, and state/local agencies.		
M	Identify demand reduction measures.		

The Poso Creek IRWM Group has defined the following Region Goals 1 through 7, as set forth in Section 4.4 of the 2014 IRWM Plan:



Please briefly describe which of these Regional Goals would be met by the proposed project or program:

The proposed project meets several of the Regional Goals:

Primary Goal No. 1

Construction of this project would enhance the water supply reliability by providing the City with increased storage capacity and system redundancy. Constructing a new water storage reservoir east of

Highway 99 will enhance the system's reliability in the event of a failure of one of the City's water supply wells, and would allow the City to still meet the water demand while repairs are made. In addition, the new water storage reservoir and booster pump station will be constructed at the existing Browning Road Well facility which is equipped with an emergency backup diesel generator which can power the booster pumps and the existing well pump simultaneously and remain fully operational in the event of a power outage east of Highway 99.

Primary Goal No. 2

This project will improve the overall efficiency of the City's water system by allowing the City to take advantage of time of use pumping and run the groundwater supply well during non-peak hours to reduce the electricity cost. Furthermore, construction of the project gives the City increased flexibility for future developments and expansion east of Highway 99, where new construction has been largely stagnant for nearly a decade. The project also increases the water system's operational flexibility by providing additional water storage capacity so that in the event that one of the water supply wells is temporarily out of service for repairs or to lower the well pump's depth setting, the City could still provide water to its customers while repairs are being made.

Primary Goal No. 4

The project protects the quality of the City's groundwater supply as the Project would provide an overall increase in the production capacity of the existing Browning Road Well which has historically lower arsenic concentrations compared to Taylor Well and Well No. 6.

Primary Goal No. 5

By increasing the overall efficiency of the system and adding to the system's time-of-use pumping capacity, energy costs for operation of the system will decrease, thereby helping the City maintain reasonable water rates for this disadvantaged community.